iSecurity WideScope

Displays the Screen Image of Other Terminals and Runs commands at Remote Terminals

User Manual

Version 10

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Chapter 1: Introduction

WideScope is a unique system that provides enhanced support to remote workstation users. With this solution, the user's screen can be viewed in real-time, as well as his QTEMP library and his interactive jobs.
Viewing and running commands in the user's session can only be done when the user approve it. The product allows controlling the user's device for 5 minutes at a time.

- When a user at a remote site reports a problem, the contents of his screen can be reproduced on your terminal (including data inserted after the last ENTER and error messages).

- You can enter commands at your terminal which will be executed at the user's remote terminal, and even use objects from the remote user's QTEMP library. While entering remote commands you can still enter commands to your local terminal.

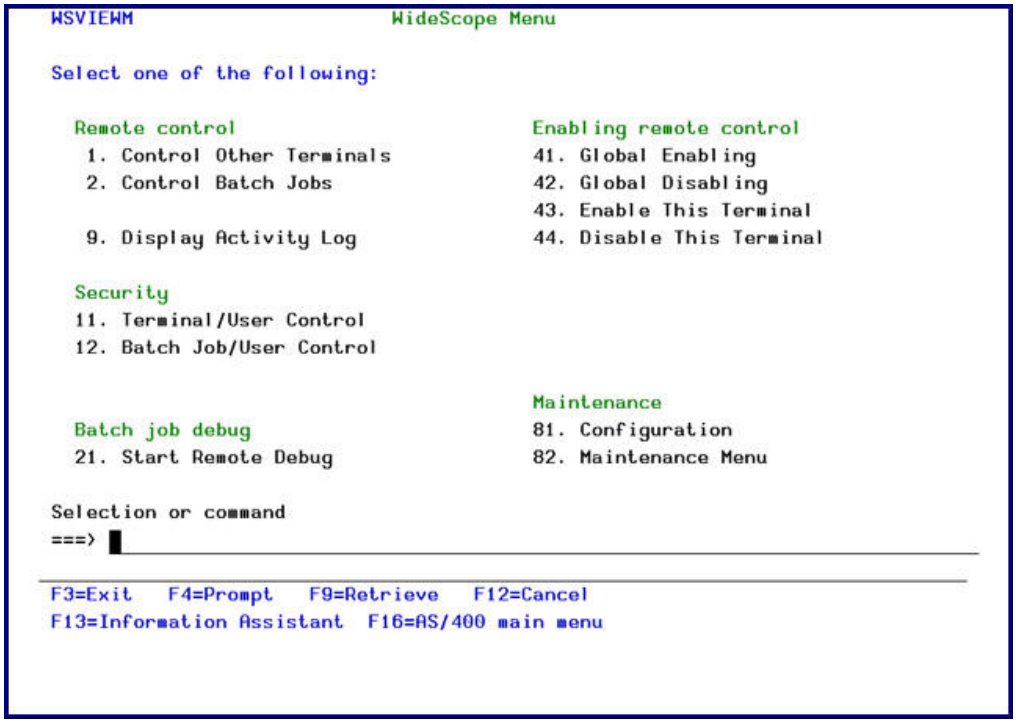
- The DEBUG mode can be entered for programs running at a remote terminal in order to trace and treat problems as they occur. This saves you from having to duplicate an error in a test environment.

By using **WideScope**'s unique message and reply system, you can communicate with the user through message windows on the screen.
The term REMOTE used here and later throughout this manual stands for any terminal connected to our computer.(The one we are working on is called the LOCAL terminal).
WideScope supports terminals connected through local control units, remote lines, pass-through and PC's running emulation.

Chapter 2: Working with WideScope

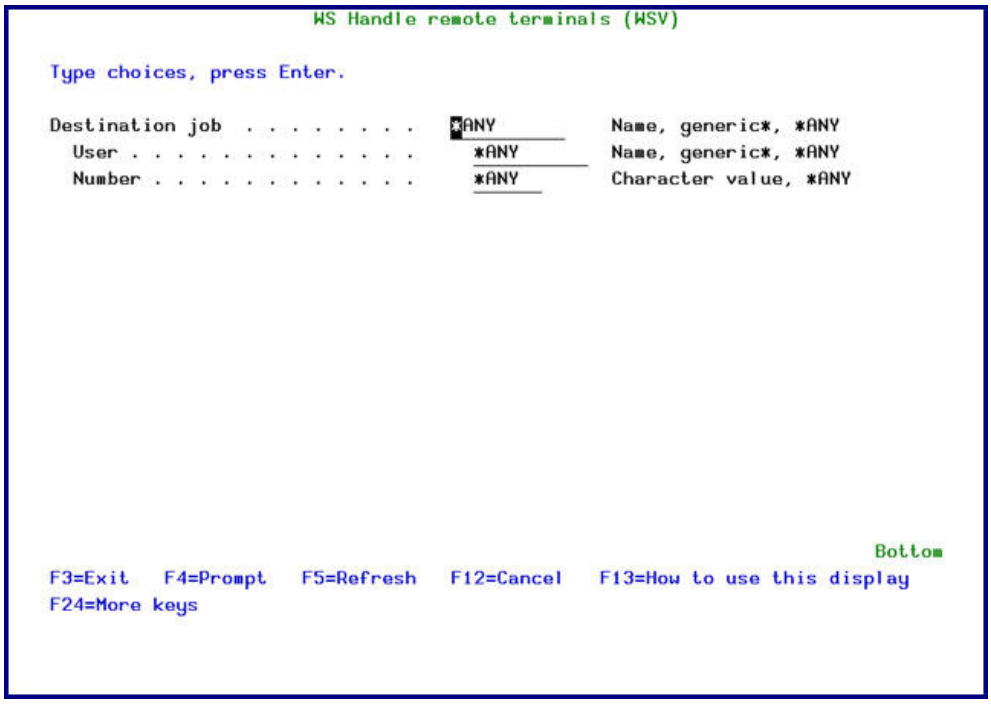
1. Any workstation wishing to allow other workstations to copy its screen and execute commands should enter the command ***WSINIT*** (This usually takes place from the user's initial program).

2. To start working with **WideScope**, type ***STRWS*** on the command line. The main menu appears.



WideScope Main Menu

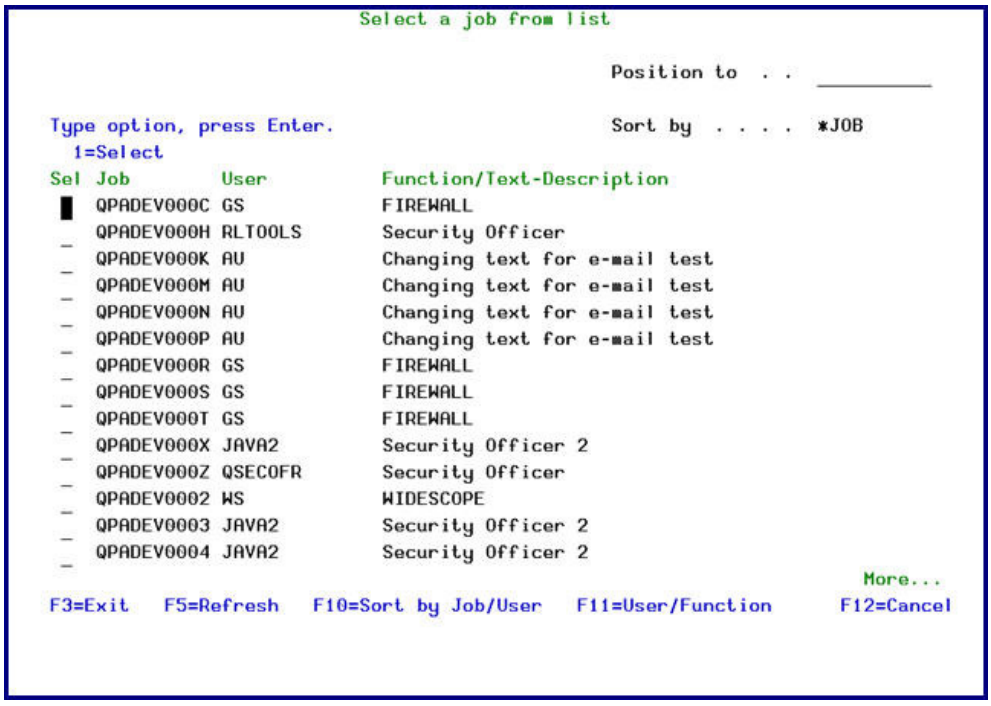
3. Select option **1. Control Other Terminals**, a list of terminals (which executed the ***WSINIT*** command), the WS Handle remote terminals (WSV) screen appears.


WS Handle remote terminals (WSV)
Type choices, press Enter.
Destination job . . . . . *ANY Name, generic*, *ANY
User . . . . . *ANY Name, generic*, *ANY
Number . . . . . *ANY Character value, *ANY
Bottom
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

WS Handle remote terminals (WSV)

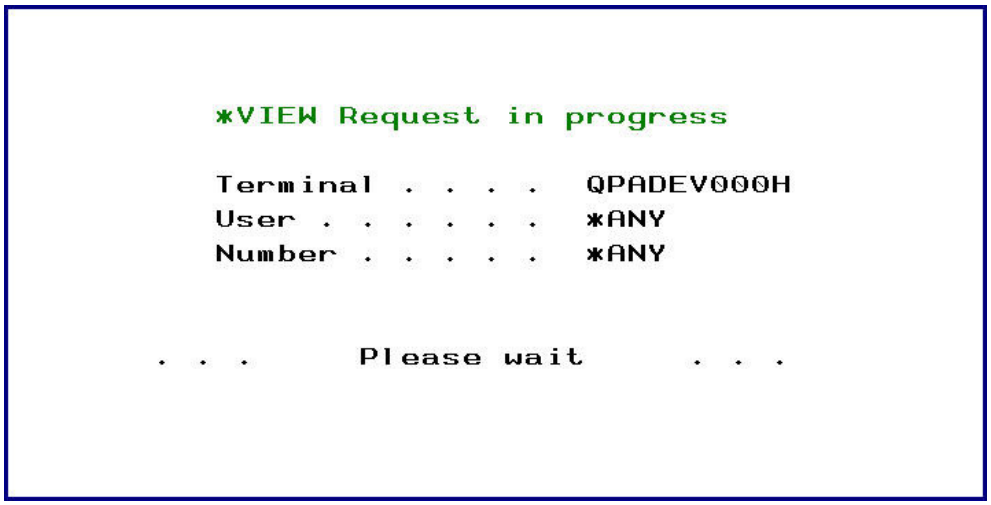
4. Type or press **F4** in job field or user name, or leave the default *ANY and press **Enter.**

5. The following screen displays to the Supporter the list of jobs for which Supporter is authorized.


Select a job from list
Position to . .
Type option, press Enter. Sort by . . . . *JOB
1=Select
Sel Job User Function/Text-Description
QPADEV000C GS FIREWALL
QPADEV000H RLTOOLS Security Officer
QPADEV000K AU Changing text for e-mail test
QPADEV000M AU Changing text for e-mail test
QPADEV000N AU Changing text for e-mail test
QPADEV000P AU Changing text for e-mail test
QPADEV000R GS FIREWALL
QPADEV000S GS FIREWALL
QPADEV000T GS FIREWALL
QPADEV000X JAVA2 Security Officer 2
QPADEV000Z QSECOFR Security Officer
QPADEV0002 WS WIDESCOPE
QPADEV0003 JAVA2 Security Officer 2
QPADEV0004 JAVA2 Security Officer 2
More...
F3=Exit F5=Refresh F10=Sort by Job/User F11=User/Function F12=Cancel

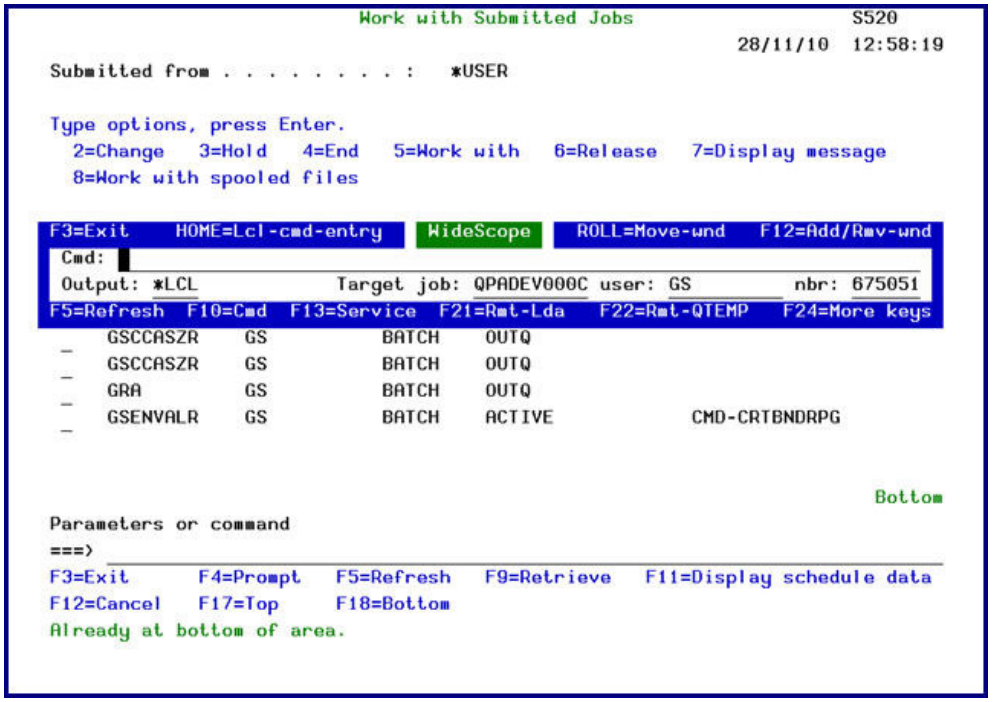
Select a job from list

6. Enter **1** to select a job and press **Enter** to display & control the User's screen. The following message appears



Control Other Terminals

7. The moveable control window displays the User's device name, user ID and job number. The CMD line appears only when Supported is authorized to execute commands.


Work with Submitted Jobs
S520
28/11/10 12:58:19
Submitted from . . . . . : *USER
Type options, press Enter.
2=Change 3=Hold 4=End 5=Work with 6=Release 7=Display message
8=Work with spooled files
F3=Exit HOME=Lcl-cmd-entry WideScope ROLL=Move-wnd F12=Add/Rmv-wnd
Cmd:
Output: *LCL Target job: QPADEV000C user: GS nbr: 675051
F5=Refresh F10=Cmd F13=Service F21=Rmt-Lda F22=Rmt-QTEMP F24=More keys
GSCCASZR GS BATCH OUTQ
GSCCASZR GS BATCH OUTQ
GRA GS BATCH OUTQ
GSENVALR GS BATCH ACTIVE CMD-CRTBNDRPG
Bottom
Parameters or command
===>
F3=Exit F4=Prompt F5=Refresh F9=Retrieve F11=Display schedule data
F12=Cancel F17=Top F18=Bottom
Already at bottom of area.

Work with Submitted Jobs

Note that the control window contains the User information in order to prevent mistakes that may caused by the Supporter transferring to a secondary job via the system request key.

Working with WideScope control window

- Move the control window with the PageUp/PageDown keys.
- Hidden/restored with the **F12** function key.

- Refresh
  To refresh the contents of the remote terminal, use the **F5** function key, or press **F17** for Auto-refresh. Whenever the remote user presses the function Key, (including Enter), or if a specified number of seconds passes, the screen is refreshed.
  Press the **Attention Key** to stop.

- To execute a command at the remote terminal
  Enter the command (e.g. DSPLIBL) in the appropriate field in the window. Press **F10** to execute the command from the remote terminal. The result will be displayed on the local terminal.

- Change the output device from *LCL to *RMT (at the top of the window). When **F10** is pressed, the command will be executed and displayed at the remote terminal. The result will be displayed at the remote terminal. (The remote terminal user must press the ENTER key to continue - see remarks).

- To write a message to be sent to the remote user, press **F10** for an *INQ message. Or **F6** for an *INFO message.

- When an *INQ message is sent, the remote user has the possibility of answering it within a specified time.

- Press **F15** to display a remote job

- Press **F16** to display the remote job log

- Press **F23** for a prompt for immediate cancellation of the remote job.

- Press **HOME** to get the Command Entry Screen, from which you can enter commands for your local job.

- Press HELP to read the online help text.

- In order to change the terminal name to another terminal which has entered the ***WSINIT*** command, clear the USER and NUMBER fields, and press ENTER. The screen contents of the chosen terminal will be displayed.

- Press **F3** to quit the program.

Remarks:

The system will wait a number of seconds for a copy screen or remote command execution to be completed. You will then get a message which will allow you either to wait again or to cancel the command.

You cannot display a screen or execute another command until the previous command has been completed.

Notice that the USER and JOB NUMBER fields for the remote job are automatically filled in. This prevents any mistakes that could occur by the remote user transferring to another job via the **system request** key.

Enabling a terminal to be copied

Introduction

The screen copy command displays the contents of the remote terminal screen on the user's screen. This includes data for which the Enter key has not yet been pressed, error messages, etc.

The user at the remote terminal will receive a message asking for his permission to allow his data to be viewed and copied, together with the ID of the copier. The data at the remote terminal is not touched. The remote user can continue with his work immediately after the copying is completed and the message has disappeared.

The WSINIT command

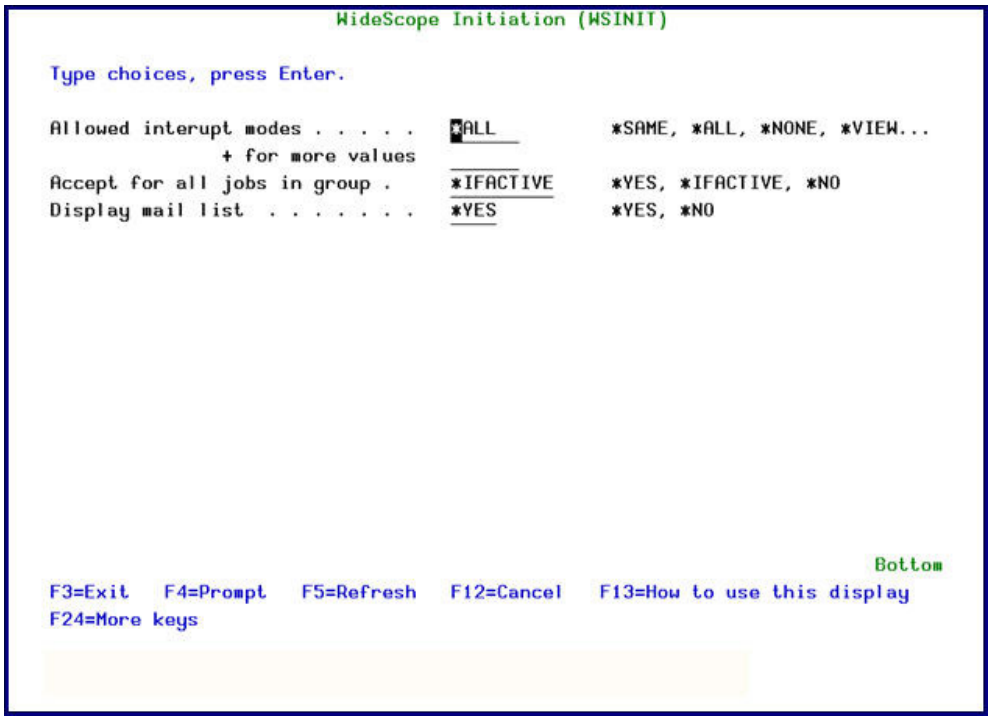
To prevent invasion of privacy, the system requires permission from users, allowing the copying of data from their screens. By activating the ***WSINIT*** command, the user allows

his work to be recorded, yet in order to access and view the information the user will be asked for his permission. This status remains until changed or until the job terminates (SIGNOFF). The statement is given by typing the command:

WSINIT

If required, this command can be included in a user's initial program, allowing his work to be copied and commands entered by authorized users of the ***WSV*** command at any time.

Type ***WSINIT*** and press **F4** to set the definitions. The supporter will be able to view and control the user's work for periods 5 minutes only


WideScope Initiation (WSINIT)
Type choices, press Enter.
Allowed interupt modes . . . . . *ALL *SAME, *ALL, *NONE, *VIEW...
+ for more values
Accept for all jobs in group . *IFACTIVE *YES, *IFACTIVE, *NO
Display mail list . . . . . *YES *YES, *NO
Bottom
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

WideScope Initiation (WSINIT)

Implementation

In order for a terminal to be monitored by **WideScope**, the command ***WSINIT*** must be run from it or choose option **71** from the **WideScope** menu). This can be performed in one of the following ways:

1. Add the ***WSINIT*** command in the initial program of the users you want to view.

2. Force ***WSINIT*** to run for all jobs without any change in any program.

Each time a terminal needs to be viewed and WSINIT has not been run in it, a message is sent to the QSYSOPR. If you want to separate these messages, create a message queue

named WIDESCOPE in library QGPL, and the messages will be directed to it automatically.

OPTION 1 - Add the WSINIT command in the initial program

In the initial program of the users you want to monitor, add the following commands:

WSINIT

MONMSG CPF0000

These commands should be added so that they will be executed before any screen is displayed.

OPTION 2 - Force WSINIT to run for all jobs

Use this method to set up all terminals for monitoring. This method does not require any change in the user program.

Background

When an interactive program terminal signs on, a specific "routing entry" is selected from an interactive sub-system to execute it. The routing entry specifies which program will have control. That program is almost always QCMD from QSYS. The following procedure will change that program name to another program that will initiate ***WSINIT*** and only then call QCMD from QSYS.

The procedure is designed to prevent possible problems even if **WideScope** is no longer installed on the system.
The source of the program is included in file WSSOURCE, library SMZ7, member WS#QCMD.

Use the following procedure:

- Duplicate the WS#QCMD program into QGPL: ***CRTDUPOBJ WS#QCMD SMZ7 *PGM QGPL***
- Transfer your job to the controlling subsystem: ***TFRJOB QCTL***
- Ensure no user is using sub-system QINTER: ***DSPSBS QINTER***
- Terminate the sub-system: ***ENDSBS QINTER***

- Print the QINTER sub-system description: ***DSPSBSD QINTER OUTPUT(*PRINT)***
- Look at the note on "routing entries" in the Background section on the previous page.
- Enter the following command for each line that contains program
- QCMD library QSYS as the program to get control: ***CHGRTGE SBSD(QINTER) SEQNBR(number) PGM(QGPL/WS#QCMD)***
- Start sub-system ***QINTER STRSBS QINTER***
- Repeat this procedure for all other interactive subsystems.

Support for 132 character screens

*RMT terminals that are in 132 character mode can be copied and displayed on any type of *LCL terminal (24x80 or 27x132).

If the *LCL terminal is capable of displaying data in 132 mode, the screen will be displayed in 132.

If the *LCL terminal is limited to displaying data in 80 mode, only part ("a corner") of the copied screen will be displayed. By using the following function keys the user is able to view other parts of the copied screen:

F19-Upper/Left F20-Upper/Right
F7 -Down/Left F8 -Down/Right

Run commands at remote terminals

Introduction

A programmer can save time and effort by executing commands, identifying and treating problems at remote terminals - all from his own terminal. He can even enter DEBUG commands for a program which is already being executed.

When necessary, the user of the WideScope system can enter the SIGNOFF command for a remote terminal, achieving a much faster and more efficient job termination than by using the ***CNLJOB *IMMED*** command.

The commands are executed at the remote terminal even if a program is already being executed there. In this case, the program is put into a wait state until the new command has been completed.

Prior requirements

To allow for remote command execution the initial setting at the remote job should be:

WSINIT *EXEC

Or

WSINIT *ALL (the default).

For more details see "prior requirements" in the section **Display screen image from other terminals.**

Directing command output

The results of remote command execution can be received at the local user's terminal (*LCL) or at the remote terminal (*RMT). When the output is directed to the remote terminal, the user there can use the screen as though he/she originally entered the command. In this case, the terminal sending the command does not need to wait for the command to finish executing, but only for it to be checked. (See also - **Technical specifications**).

Executing the command

To execute the command at the remote terminal, enter it into the field in the window and press **F10**. For command parameter prompting presses **F4**. Pressing **ENTER** does not cause the command to be executed.

Authority for using commands

The only commands allowed to be executed are those for which both the source terminal user and the remote terminal user have authority to use. In addition, the commands can only affect objects for which the user at the remote terminal has authorized access.

Message sub-system

Two types of messages can be sent from the *LCL terminal to the *RMT terminal:

***INFO -** Information only.
***INQ** -Reply is enabled.

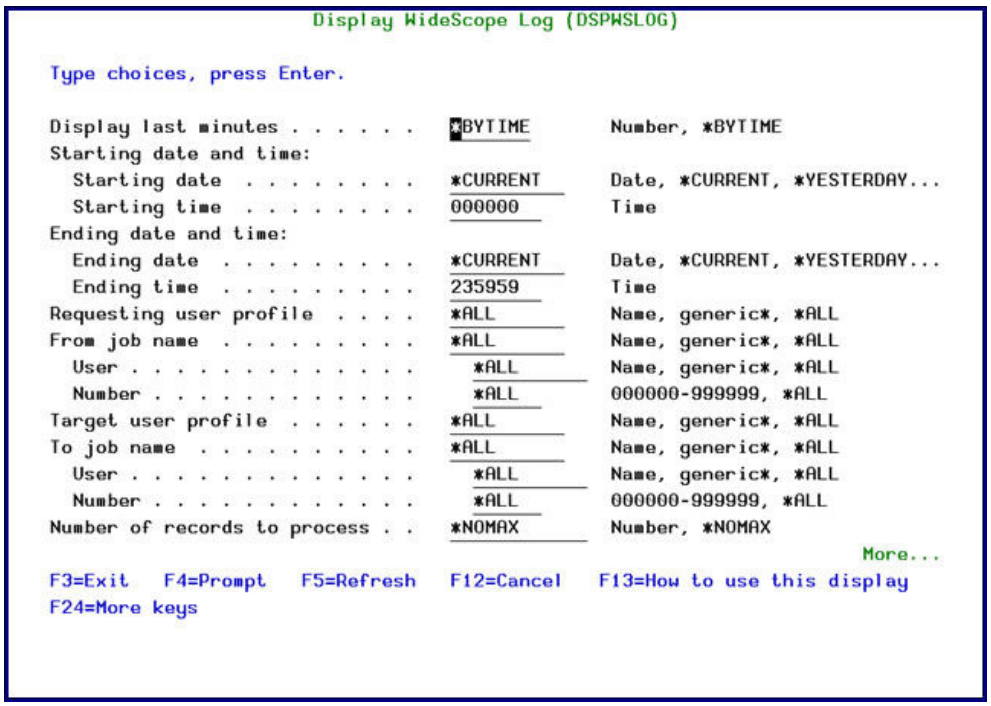
F6 activates the message option. A window for the outgoing message is then displayed and can be moved up and down using the Page Up/Down keys. When sent, the same message window in the same position is displayed on the remote screen. On *INQ messages, a second window is displayed to allow a reply.

Use **F6** to send the message as an *INFO message.
Use **F10** to send the message as an *INQ message.

Note: The message disappears automatically after the time specified in the parameter file. The duration of the message is one of the parameters added to the parameter file (use ***CALL SMZ7/WSA*** to modify the parameter file). If the reply for an *INQ message is not finished in the time allotted for it in the parameters file, it will be sent "as it is" when the time expires.

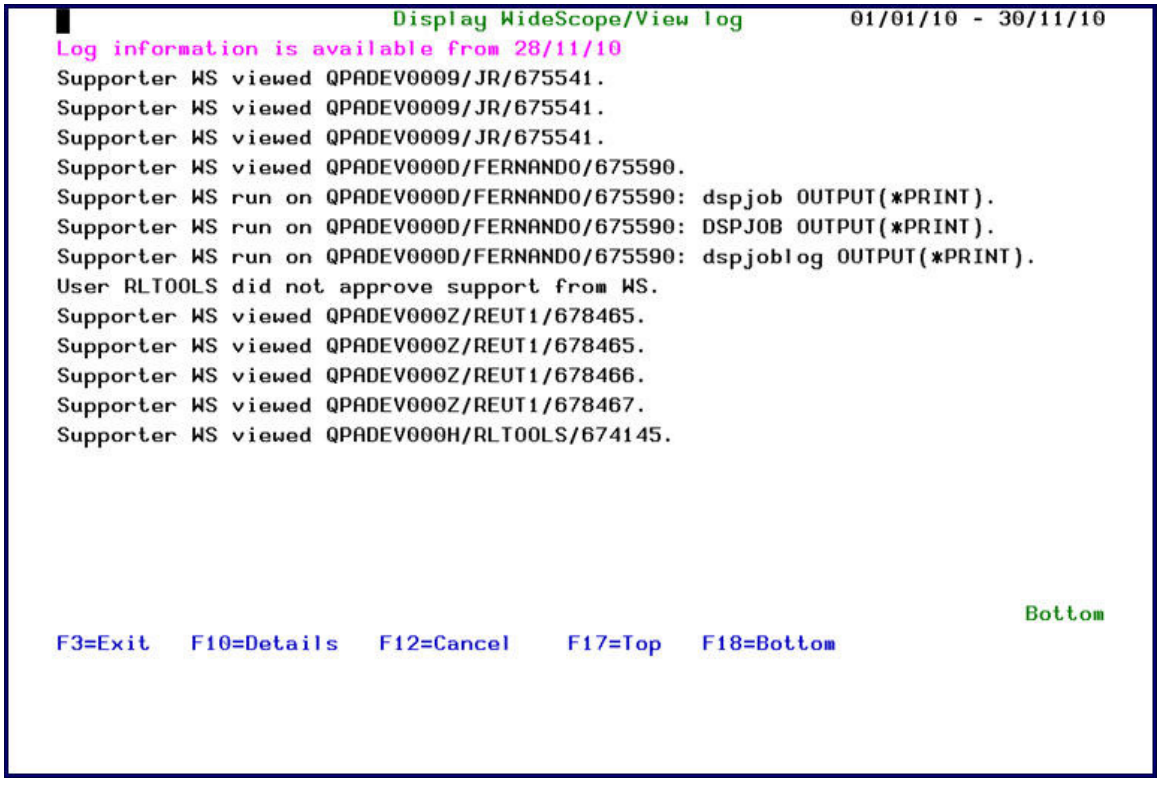
Activity Log

To view the **WideScope** activity log, select option **9. Display Activity Log** from the main menu or type the command ***DSPWSLOG***. The **Display WideScope Log** screen appears.


Display WideScope Log (DSPWSLOG)
Type choices, press Enter.
Display last minutes . . . . . *BYTIME Number, *BYTIME
Starting date and time:
Starting date . . . . . *CURRENT Date, *CURRENT, *YESTERDAY...
Starting time . . . . . 000000 Time
Ending date and time:
Ending date . . . . . *CURRENT Date, *CURRENT, *YESTERDAY...
Ending time . . . . . 235959 Time
Requesting user profile . . . . *ALL Name, generic*, *ALL
From job name . . . . . *ALL Name, generic*, *ALL
User . . . . . *ALL Name, generic*, *ALL
Number . . . . . *ALL 000000-999999, *ALL
Target user profile . . . . . *ALL Name, generic*, *ALL
To job name . . . . . *ALL Name, generic*, *ALL
User . . . . . *ALL Name, generic*, *ALL
Number . . . . . *ALL 000000-999999, *ALL
Number of records to process . . *NOMAX Number, *NOMAX
More...
F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

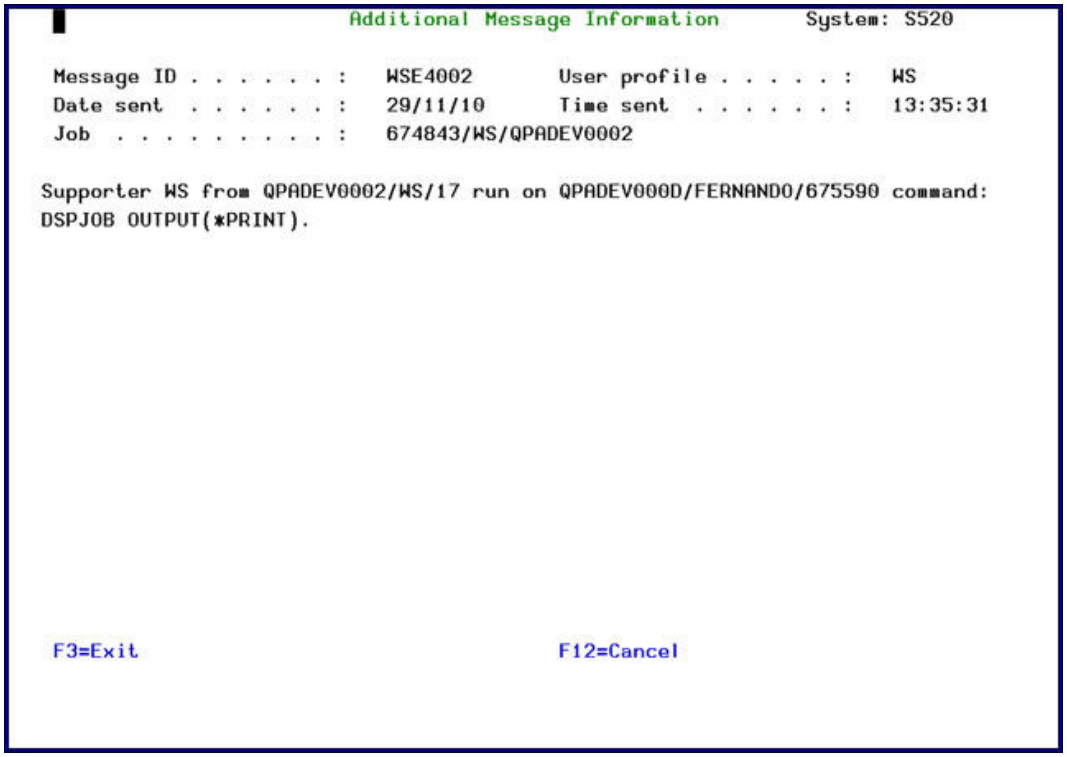
Display WideScope Log (DSPWSLOG)

1. Press **Enter** or define a filter to the log. A list of transactions log appears


Display WideScope/View log 01/01/10 - 30/11/10
Log information is available from 28/11/10
Supporter WS viewed QPADEV0009/JR/675541.
Supporter WS viewed QPADEV0009/JR/675541.
Supporter WS viewed QPADEV0009/JR/675541.
Supporter WS viewed QPADEV000D/FERNANDO/675590.
Supporter WS run on QPADEV000D/FERNANDO/675590: dspjob OUTPUT(*PRINT).
Supporter WS run on QPADEV000D/FERNANDO/675590: DSPJOB OUTPUT(*PRINT).
Supporter WS run on QPADEV000D/FERNANDO/675590: dspjoblog OUTPUT(*PRINT).
User RLTOOLS did not approve support from WS.
Supporter WS viewed QPADEV000Z/REUT1/678465.
Supporter WS viewed QPADEV000Z/REUT1/678465.
Supporter WS viewed QPADEV000Z/REUT1/678466.
Supporter WS viewed QPADEV000Z/REUT1/678467.
Supporter WS viewed QPADEV000H/RLTOOLS/674145.
Bottom
F3=Exit F10=Details F12=Cancel F17=Top F18=Bottom

2. The log shows transaction made by the user or supporter.

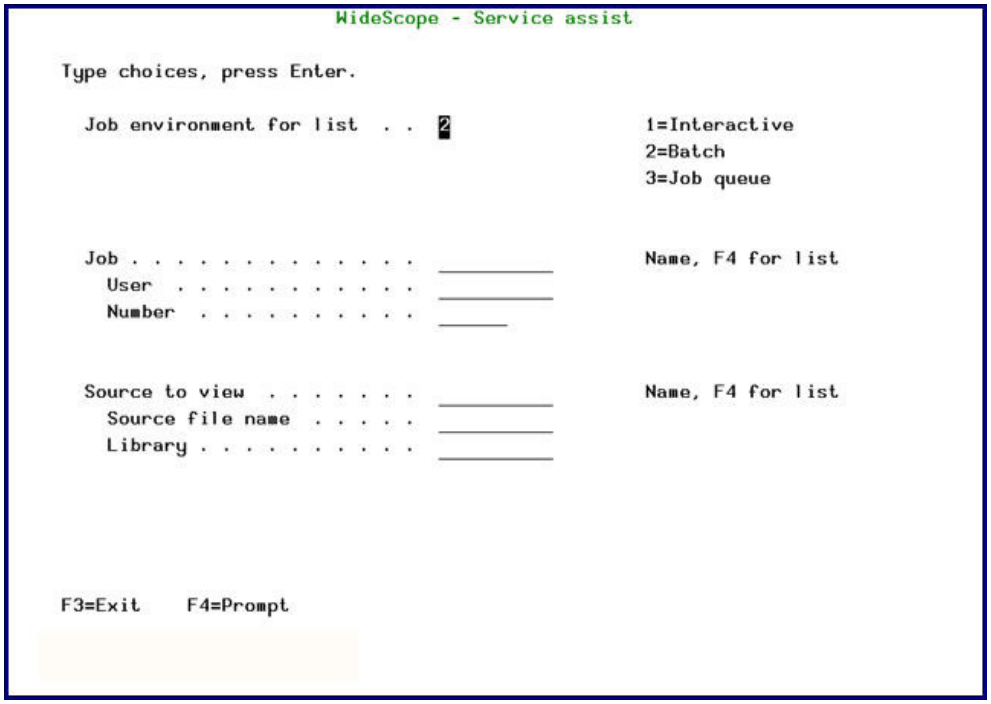
3. In order to display more information, place the curser on a transaction line and press **Enter**


Additional Message Information
System: S520
Message ID . . . . . : WSE4002
User profile . . . . . : WS
Date sent . . . . . : 29/11/10
Time sent . . . . . : 13:35:31
Job . . . . . : 674843/WS/QPADEV0002
Supporter WS from QPADEV0002/WS/17 run on QPADEV000D/FERNANDO/675590 command:
DSPJOB OUTPUT(*PRINT).
F3=Exit
F12=Cancel

Additional Message Information

Chapter 3: Remote Debug of Batch and Online Jobs

The command ***WSD*** (or Option **21. Start Remote Debug**) is now available for debug of batch jobs. The command allows the jobs in the system to be displayed and selected. You can also determine the name of the source program and display the source.


WideScope - Service assist
Type choices, press Enter.
Job environment for list . . 2
1=Interactive
2=Batch
3=Job queue
Job . . . . . .
User . . . . . .
Number . . . . . .
Name, F4 for list
Source to view . . . . . .
Source file name . . . . .
Library . . . . . .
Name, F4 for list
F3=Exit F4=Prompt

WideScope - Service assist

Chapter 4: Security Considerations

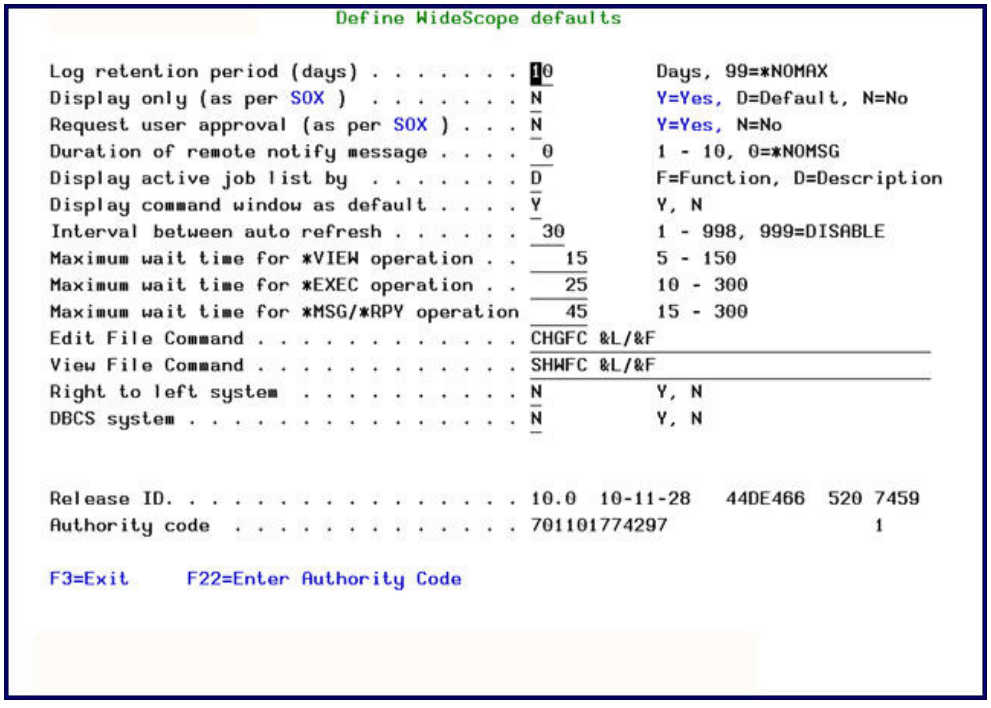
WideScope's high standards of security prevent abuse of the product and determine:

- Who is able to use **WideScope**.
- Which active jobs can be the target of **WideScope** use.
- Which commands can be executed.
- Informs the remote user that a request was issued to display his screen, and by whom.
- Logs all requests.

SOX Regulations

WideScope will request the user's approval in order to view his display.
To set the SOX regulations, follow this procedure:

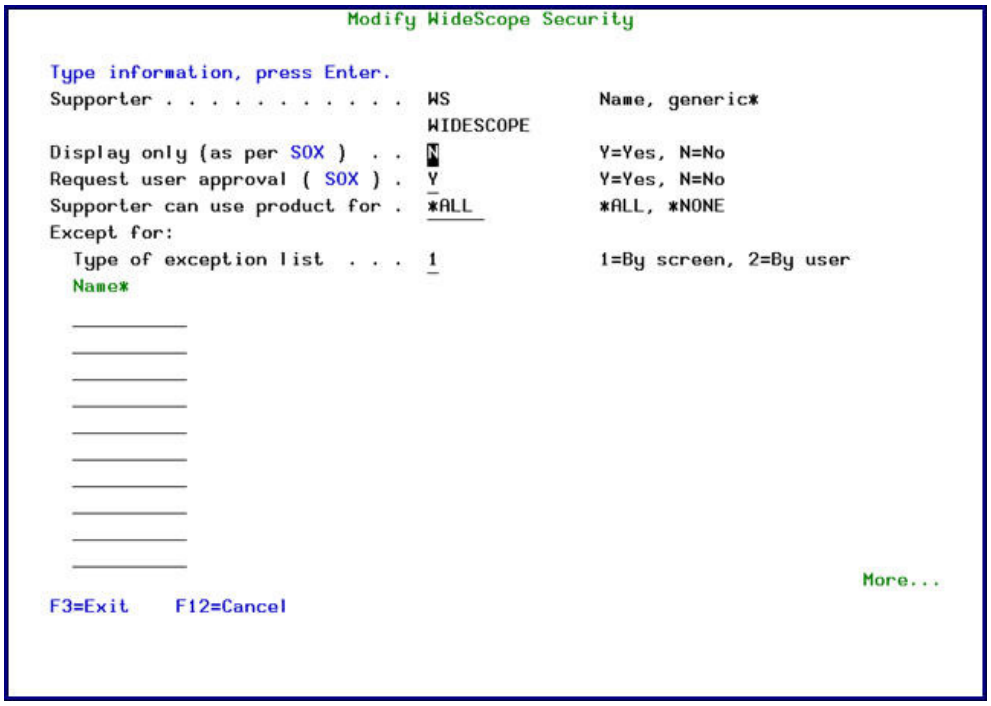
1. Select option **81. Configuration** from the main menu. The **Define WideScope defaults** screen appears


Define WideScope defaults
Log retention period (days) . . . . . 10 Days, 99=*NOMAX
Display only (as per SOX) . . . . . N Y=Yes, D=Default, N=No
Request user approval (as per SOX) . . . N Y=Yes, N=No
Duration of remote notify message . . . . 0 1 - 10, 0=*NOMSG
Display active job list by . . . . . D F=Function, D=Description
Display command window as default . . . . Y Y, N
Interval between auto refresh . . . . . 30 1 - 998, 999=DISABLE
Maximum wait time for *VIEW operation . . 15 5 - 150
Maximum wait time for *EXEC operation . . 25 10 - 300
Maximum wait time for *MSG/*RPY operation 45 15 - 300
Edit File Command . . . . . CHGFC &L/&F
View File Command . . . . . SHWFC &L/&F
Right to left system . . . . . N Y, N
DBCS system . . . . . N Y, N
Release ID. 10.0 10-11-28 44DE466 520 7459
Authority code 701101774297 1
F3=Exit F22=Enter Authority Code

Define WideScope defaults

2. Type '**Y**' at the **Limit product as per SOX regulation** and **Request user approval SOX consideration** fields.

3. Select option **11. Terminal/User Control** from the main menu the **Work with WideScope Security** appears.


Modify WideScope Security
Type information, press Enter.
Supporter . . . . . WS WIDESCOPE
Name, generic*
Display only (as per SOX) . . N
Y=Yes, N=No
Request user approval (SOX) . Y
Y=Yes, N=No
Supporter can use product for . *ALL
*ALL, *NONE
Except for:
Type of exception list . . . 1
1=By screen, 2=By user
Name*
More...
F3=Exit F12=Cancel

Modify WideScope Security

- When the **Limit product as per SOX regulation** and **Request user approval SOX consideration** fields in the configuration screen (option **81**) are set to 'YES', the **Limit as per SOX regulation** field is set to '**Y**' (and cannot be changed), which means that the controller can view the user screen, yet he cannot execute commands.

- When the SOX definitions in the configuration screen (option **81**) are set to '**D**' = default, a list of users who are authorized to execute commands will be defined through this screen.

In the example above, the rule says that the rules defined in this screen will apply on all user names beginning with W*

NOTE:

The supporter will be able to control the user's work for periods of 5 minutes

The user will be able to see who is controlling his work when looking at the JOBLOG

Who is able to use WideScope

In order to be able to use **WideScope**, the user must be granted authority for the ***WSV*** command. Initially, the only user profile authorized to use **WideScope** is the Security Officer. The Security Officer is able to grant other users permission to use WideScope by issuing the following command:

GRTOBJAUT WSV *CMD user-name

Integrated security system

The security system (***WRKWSSEC*** command or option **11** from the **WideScope** menu) defines users who are allowed to use WideScope.

By using **WideScope** security system you can achieve the following:

- Defined users who are allowed to use **WideScope**
- For each such user - defined the default authority for all terminals, whether it is "allowed" or "not allowed".
- Define exceptions for the above default.

Generic names are allowed to enhance these definitions and increase the flexibility of the security system.

To use the ***WRKWSSEC*** command you have to be the Security Officer or get specific authority from him to use it. In addition, a password is used to disable the use of this command by users who have the QSECOFR authority but are not authorized to modify the WideScope security definition.

This password is initially set to QSECOFR and can be modified from within the command by F10-Modify password.

Which active jobs can be the target of WideScope use?

Every job that agrees to be the target of **WideScope** use must declare it by issuing the ***WSINIT*** command. This declaration remains in effect until the job ends or a ***WSINIT*** *NONE command is issued.

It is easy to achieve a situation in which all users or groups of users are always potential targets for **WideScope** use, while other users - such as the DP staff, the management or

the personnel department - are not. To do so, add the following command to the Initial Program of those users: ***WSINIT***

Which commands can be executed?

The only commands that can be executed are those that both the Local user and the Remote user have authority to use. Furthermore, the commands executed through WideScope can only affect objects to which the remote user has authorized access.

Informing the remote user that a request was issued to display his screen, and by whom.

With **WideScope** the target job is always:

1. Informed when a View/Exec. request is being performed.
2. Given the full details of the job that issued the request.
3. Given a Log of all requests.

WideScope logs all requests

The job logs of both the *LCL and *RMT terminals clearly reflect all WS operations and their source.

Appendix A -

Technical specifications

The **WideScope** system consists of a number of programs, almost all of which are written in RPG III and CLP. The programs are contained in library SMZ7. Other libraries, SMZTMPA and SMZTMPB, contain temporary objects created by the system. These libraries do not need to be included in the library lists. The system library QGPL contains only the command definitions WSV and WSINIT.

Approximate size	0.9MB for the program library.0.2MB for other data, for about 100 terminals.
Performance	The system does not cause performance degradation.
Response time	This depends on the computer workload. The response time to copy data from a terminal on a communications line depends also on the line speed.
Supported terminals	The system supports any terminal with a 24x80 or 27x132 display size. This includes terminals connected via passthrough, PC's running emulation programs, etc.
Supported commands	Only commands that both the Local and the Remote job have authority for, can be executed by WideScope.
Output: *LCL	This parameter is supported for commands that may accept the OUTPUT() parameter. Initially, the product supports AS/400 commands. This option can be extended to support locally defined commands, by modifying file WSPNAM in library SMZ7.

Appendix B -

Setting product defaults

To adjust **WideScope** to the special needs of your site, enter

CALL SMZ7/WSA

Using this method you are able to adjust default wait times. On the System i you can also specify the command syntax that **WideScope** should support - Native or S/38 environment.

Optional *RMT notify message

Every request is logged in the job log of the *RMT job.

Besides, there is an option that whenever a remote activity is done, the user will be notified by a message on the bottom of his screen. It is possible to set the duration or to prevent its appearance, use ***CALL SMZ7/WSA***.

The value entered next to "Duration of notify message" specifies the time in seconds that the message will be displayed. A value of 0 prevents the appearance of the message.

Appendix C -

Group job support

The ***WSINIT*** command has parameter GRPMSGQ( ) which accepts one of the following values:

*YES	The job is changed to a group job and the Group Message Queue is kept for WideScope use.
*NO	No action is taken to support Group Jobs.
*IFACTIVE	If the job is an active Group Job the Group Message Queue is kept for WideScope use.

Default is *IFACTIVE

This means that in order to support Group Jobs in the correct way, either enter ***WSINIT GRPMSGQ(*YES)*** at the beginning of the job or re-enter ***WSINIT*** after the job is changed to a Group Job.